CLAIMS

1.   A speech processing system comprising:

speech recognition means for subjecting an input speech signal to a speech recognition process to thereby specify a recognized character string corresponding to said speech signal;

operation character string determination means for determining whether or not said recognized character string specified by said speech recognition means includes a non-specific instruction type operation character string in which an object to be operated is not specified;

request level determination means for determining a request level related to said operation character string on the basis of at least one of a feature amount of said speech signal and said recognized character string; and

operation instruction means for, when said operation character string determination means makes a positive determination, specifying an object to be operated on the basis of a content of said operation character string and said request level and providing a predetermined operation instruction.

2.   A speech processing system according to claim 1, wherein said operation character string determination means determines whether or not said recognized character string includes a specific instruction type operation character string in which an object to be operated is specified.

3.   A speech processing system according to claim 1, wherein said request level determination means extracts as a feature amount at least one of a loudness of a voice, a pitch of said voice and a phonation interval on the basis of said speech signal and determines said request level on the basis of said feature amount which has been extracted.

4.   A speech processing system according to claim 2, wherein when said operation character string determination means determines that

said recognized character string includes said specific instruction type operation character string, said operation instruction means gives a predetermined operation instruction to said object to be operated which has been specified by said specific instruction type operation character string.

5   5.   A speech processing system according to claim 1, wherein said predetermined operation instruction, which is given by said operation instruction means when said recognized character string includes said non-specific instruction type operation character string, includes at least an indication of information and an instruction to execute an operation, and when

10   said request level determined by said request level determination means is low, said operation instruction means instructs said object to be operated which has been specified to give said indication of information.

6.   A speech processing system comprising:

speech recognition means for subjecting an input speech signal

15   to a speech recognition process to thereby specify a recognized character string corresponding to said speech signal;

operation character string determination means for determining whether or not said recognized character string specified by said speech recognition means includes a specific instruction type operation character

20   string in which an object to be operated is specified;

request level determination means for extracting as a feature amount at least one of a loudness of a voice, a pitch of said voice and a phonation interval on the basis of said speech signal and determining a request level related to said operation character string on the basis of said

25   feature amount which has been extracted; and

operation instruction means for, when said operation character string determination means determines that said recognized character string includes said specific instruction type operation character string, providing a predetermined operation instruction to said object to be operated which has

30   been specified by said specific instruction type operation character string.

7.   A speech processing system according to claim 6, wherein said operation character string determination means also determines whether or not said recognized character string includes a non-specific instruction type operation character string.

8.   A speech processing system according to claim 6, wherein said request level determination means comprises:

a sound pressure level measurement section for measuring a sound pressure level on the basis of said input speech signal;

an average sound pressure level storage section for storing an average sound pressure level of speech spoken by a user; and

a sound pressure level comparison section for comparing a sound pressure level outputted from said sound pressure level measurement section with said average sound pressure level stored in said average sound pressure level storage section and determining a level of loudness of said voice.

9.   A speech processing system according to claim 6, wherein said request level determination means comprises:

a fundamental frequency measurement section for measuring a fundamental frequency of speech on the basis of said input speech signal;

an average fundamental frequency storage section for storing an average fundamental frequency of speech spoken by a user; and

a fundamental frequency comparison section for comparing said fundamental frequency outputted from said fundamental frequency measurement section with said average fundamental frequency stored in said average fundamental frequency storage section and determining a level of pitch of said voice.

10.   A speech processing system according to claim 6, wherein said request level determination means comprises:

a phonation interval measurement section for measuring a phonation interval of speech on the basis of said input speech signal;

an average phonation interval storage section for storing an average phonation interval of speech spoken by a user; and

a phonation interval comparison section for comparing said phonation interval outputted from said phonation interval measurement section with said average phonation interval stored in said average phonation interval storage section and determining a level of phonation interval of said voice.

11. A speech processing system according to claim 6, wherein when said recognized character string includes a character string related to a predetermined modifier expressing a request level, said request level determination means also determines said request level on the basis of said character string.

12. A speech processing system according to claim 11, wherein said request level determination means comprises:

a modifier detection section for detecting said predetermined modifier included in said recognized character string;

a request level recognition data storage section for storing a data table indicating a relationship between said predetermined modifier detected by said modifier detection section and a request level corresponding to said modifier; and

a request level recognition section for recognizing said request level on the basis of said predetermined modifier detected by said modifier detection section and said data table stored in said request level recognition data storage section.

13. A speech processing system according to claim 7, wherein said predetermined operation instruction, which is given by said operation instruction means when said recognized character string includes said non-specific instruction type operation character string, includes at least an indication of information and an instruction to execute an operation, and when said request level determined by said request level determination means is

low, said operation instruction means instructs said object to be operated which has been specified to give said indication of information.

14.   A speech processing system comprising:

speech recognition means for subjecting an input speech signal to a speech recognition process to thereby specify a recognized character string corresponding to said speech signal;

operation character string determination means for determining whether or not said recognized character string specified by said speech recognition means includes a non-specific instruction type operation character string in which an object to be operated is not specified;

request level determination means for, when said recognized character string includes a character string related to a predetermined modifier expressing a request level, determining said request level on the basis of said character string; and

operation instruction means for, when said operation character string determination means makes a positive determination, specifying an object to be operated on the basis of said operation character string and said request level and giving a predetermined operation instruction.

15.   A speech processing system according to claim 14, wherein said request level determination means comprises:

a modifier detection section for detecting said predetermined modifier included in said recognized character string;

a request level recognition data storage section for storing a data table indicating a relationship between said predetermined modifier detected by said modifier detection section and a request level of a user corresponding to said modifier; and

a request level recognition section for recognizing said request level of said user on the basis of said predetermined modifier detected by said modifier detection section and said data table stored in said request level recognition data storage section.

16.   A speech processing method comprising:

subjecting an input speech signal to a speech recognition process to thereby specify a recognized character string corresponding to said speech signal;

determining whether or not said recognized character string includes a non-specific instruction type operation character string in which an object to be operated is not specified;

identifying a request level related to said operation character string on the basis of at least one of a feature amount of said speech signal and said recognized character string; and

specifying, when said operation character string is included, an object to be operated on the basis of the content of said operation character string and said request level and providing a predetermined operation instruction.

17.   A speech processing method according to claim 16, wherein said act of determining said operation character string includes determining whether or not said recognized character string includes a specific instruction type character string in which an object to be operated is specified.

18.   A speech processing method according to claim 16, wherein said request level is obtained by extracting as a feature amount at least one of a loudness of a voice, a pitch of said voice, and a phonation interval on the basis of said speech signal and determining said request level on the basis of said feature amount which has been extracted.

19.   A speech processing method according to claim 16, wherein , when said recognized character string includes a character string related to a predetermined modifier expressing said request level, said request level is determined on the basis of said character string.

20.   A speech processing method according to claim 16, wherein said operation instruction, which is given by said operation instruction means

when said recognized character string includes said non-specific instruction type operation character string, includes at least an indication of information and an instruction to execute an operation, and when said request level is low, said operation instruction means instructs said object to be operated

5   which has been specified to give said indication of information.